NATURAL RESOURCES CONSERVATION SERVICE
U.S. DEPARTMENT OF AGRICULTURE

FACT SHEET

TEMPORARY EROSION CONTROL AROUND THE HOME FOLLOWING A FIRE

STRAW BALE CHECK DAM

What is it?
These are **temporary sediment barriers** constructed of straw bales located across small drainages.

When is it used?
These temporary structures are used to slow debris flows in small channels. They are not intended to provide protection from large storm events nor to control debris flows in water bodies such as creeks, streams and rivers.

Planning Criteria:
Straw Bale Check Dam design limits are as follows:

Slope	Maximum Drain Area	Maximum Slope Length Between Check Dams
0 -15 percent	1 acre	200 feet
15 - 20 percent	1/2 acre	100 feet
>20 percent	Not Recommended	---

Methods and Materials: Bales should be bound with wire or nylon string. Twine bound bales are less durable. The bales should be placed in rows with bale ends tightly abutting the adjacent bales.

Downstream Row (refer to illustration): Dig a trench across the small channel, wide enough and deep enough to so that the top of the row of bales placed on their long, wide side is level with the ground. The tops of bales across the center of the channel should all be level and set at the same elevation. Place the bales in position and stake them according to the instructions below.

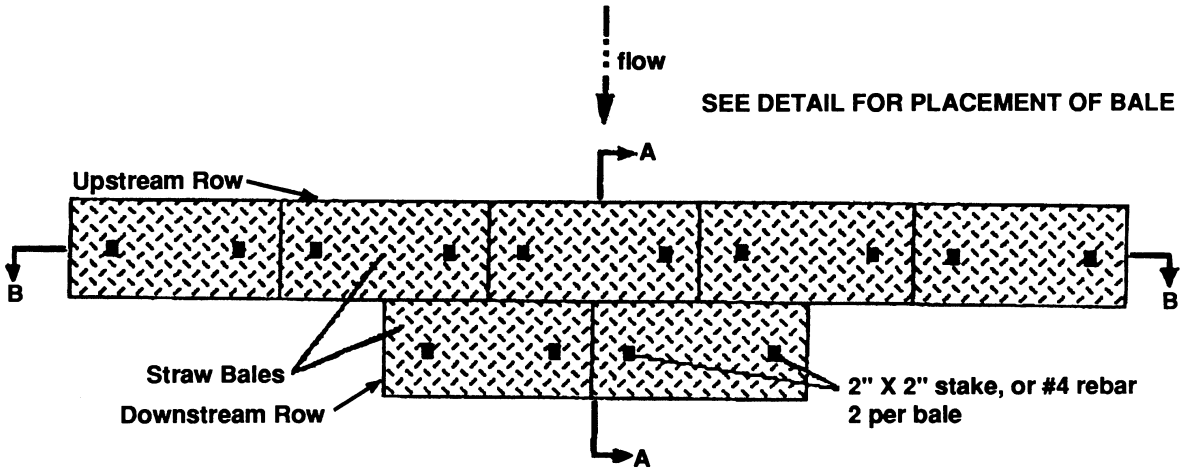
Upstream Row: Dig another trench across the small channel, upstream and immediately adjacent to the first row of bales. The trench should be wide enough to accommodate a row of bales set vertically on their long edge. The trench should be deep enough so that at least 6 inches of each bale is below ground starting with the bale in the channel bottom. The trench should be as level as possible so that the tops of the bales across the center of the channel are level and water can flow evenly across them.

Continue this trench up the side slopes of the small channel to a point where the unburied bottom line of the highest bale (point “C”, illustration) is higher than the top of the bales that are in the center of the channel (point “D”, illustration).

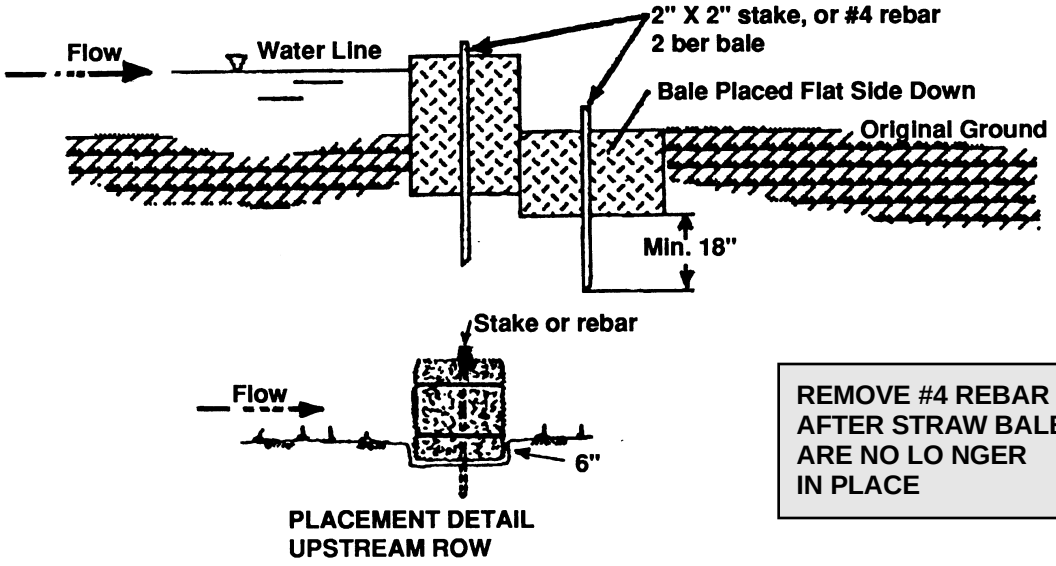
Anchorage: Drive 2 x 2 stakes or #4 rebar through the bales and into the ground 1 1/2 to 2 feet for anchorage. The first stake in each bale should be driven toward a previously laid bale to force the bales together (see illustration).

Maintenance: Inspect the bale check dam and provide necessary maintenance following each storm period. It is important to assure that loose straw does not enter storm drain facilities. Remove the bales and stakes once permanent drainage and stabilization is reestablished. Used straw can be used as mulch in other areas.

Plan - Typical Straw Bale Check Dam

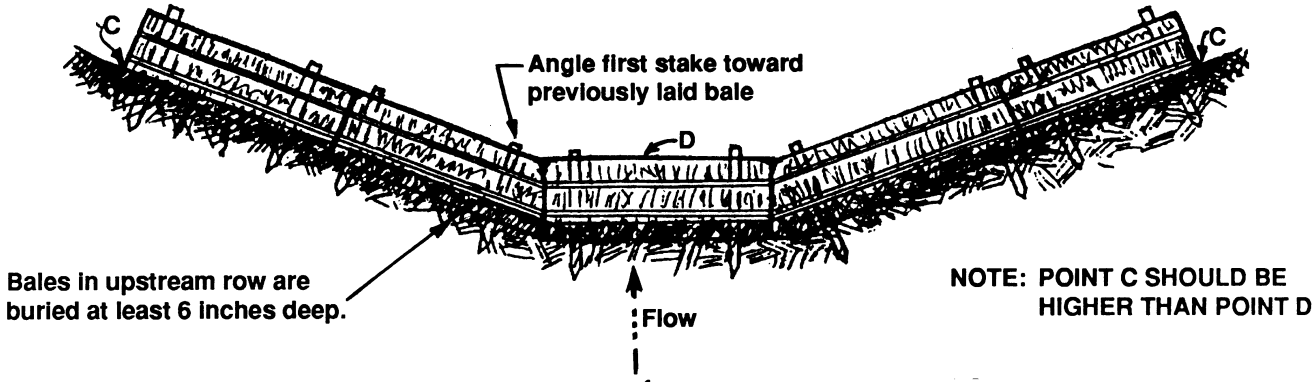


Section A-A



REMOVE #4 REBAR AFTER STRAW BALES ARE NO LO NGER IN PLACE

Section B-B



Where to Get Help: Technical assistance is available from your local USDA Natural Resources Conservation Service office or your local Resource Conservation District regarding the use of this practice and other treatments.